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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,461	03/14/2006	Michael Charles Bartlett	13058N/041750	2845
32885 7590 01/28/2009 STITES & HARBISON PLLC 401 COMMERCE STREET SUITE 800 NASHVILLE, TN 37219				
EXAMINER				
BONK, TERESA				
ART UNIT		PAPER NUMBER		
3725				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/511,461

**Applicant(s)**

BARTLETT ET AL.

**Examiner**

TERESA BONK

**Art Unit**

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-53 and 56 is/are rejected.
- 7) ☒ Claim(s) 54, 55, 57 and 58 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/02)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 17, 2008 has been entered.

### ***Specification***

The abstract of the disclosure is objected to because it does not commence on a separate sheet of paper. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30-33, 42-44, 46-49, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlak et al. (WO 01/88452) in view of Hatagi et al. (US Patent 3,678,226), newly cited. Pawlak discloses an arrangement for cooling a roll containing all the claim elements including, a hollow shaft (5) mounted to a rotatable housing and a cooling medium line (13)

having an inlet and outlet (14) communicating with an elbow portion (elbow inlet shown in figure 2) with a first length being substantially perpendicular to the axis of the shaft and the second length extending from the first length in the direction of the shaft (see figure 4 with respect to the elbow and its respective portions attached to member 13). A sealed distal end is shown in figure 1 at end where outlet 14 is clearly closer to the end than the inlet of member 13 as shown in figures 1 and 2. Distal end being sealed at 19 as required by claim 14 is shown in figure 1. A second medium cooling line, as required by claim 32, is shown in figure 2 as line 9.

Pawlak discloses the invention substantially as claimed except for wherein the cooling medium line remains stationary when in use. Hatagi et al. discloses a hollow roll having a source of cooling liquid (14) connected to the hollow roll shaft (coupling member 3, roll sleeve 2, shaft 1 and roll body 4 are joined to form an integrated roll, Column 1, lines 50-55) for passing liquid therethrough (Column 1, lines 67+) since the cooling unit is a separate from the rolling unit it is capable of remaining stationary even when the rolling unit is rotated. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Pawlak's cooling distributing head 11 and line 13 for Hatagi's cooling unit (14) because simple substitution of one known element for another obtains predictable results including removing heat in a roll in a simple and inexpensive manner (Column 2, lines 36-37).

Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlak '452 in view of Hatagi '226 further in view of Timm (US Patent 5,098,135) or Ives (US Patent 6,126,207). Timm is relied upon to teach that it is known to manufacture a rotary joint heat exchange device such that an annular flange connection is utilized to secure an elbow (108) and a

shaft member (52). Ives also teaches a connection like that of Tim (figures 1 and 2). Therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention, to have provided an annular connection between the elbow portion and member 11 of Pawlak for providing a strong, durable and detachable connection between the two.

Claims 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlak '452 in view of Hatagi '226 further in view of Jarrett (GB 2046386). Jarrett is relied upon to teach that it is known to manufacture an arrangement for cooling a roll where the elbow portion (6) comprises internal and external threads (7, 8) in order to provide an attachment means (Figure 1). Therefore it would have been obvious to use a threaded connection between the shaft (5) and member (13) of Pawlak for the purpose of providing a water tight and sturdy connection since such a combination would yield predictable results. Ridges as required by claim 41 are read onto threads as shown. A spacer as required by claim 45 is read onto o-ring (14) and would have been obvious to include in Pawlak for the purpose of providing a tight seal.

Regarding claims 37 and 40 it would have been obvious to include an internal and external connection means in the first and second lengths of the Pawlak elbow for the purpose of flexibility of connection (i.e. attachment to a pipe member having either an internal or external connection or differently sized piping), since the examiner takes official notice that providing an internal and an external thread on a pipe coupling is well known in the art.

Claims 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlak '452 in view of Hatagi '226. Absent any disclosure of criticality, advantage or solution to a given

problem it is considered that the tapering of the shaft as claimed is a design choice and does not patentably distinguish over the prior art. With respect to the outlet channel being threaded, such construction would have been obvious for the purpose of providing a discharge pipe attachment to the device as such construction is well known in the art (official notice taken).

Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlak '452 or Hatagi '226 in view of Ostertag (US Patent 4,922,739), newly cited. Pawlak discloses an arrangement as described above. Hatagi discloses an arrangement comprising a housing (2) to be secured to a roll (4), a hollow shaft (1) mounted for rotational movement and a cooling medium line to convey cooling medium into the roll via the interior shaft (14). Pawlak and Hatagi disclose the invention substantially as claimed except for the pressure release means for controlling the pressure level. Ostertag is a roller tool with cooling means (Column 2, 25-27) relied upon to teach pressure release means for releasing internal pressure in the shaft when the internal pressure substantially exceeds a threshold pressure level (Column 2, lines 30-35; Column 4, lines 15-20; Column 5, lines 1-7 and Column 7, lines 14-20). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Pawlak or Hatagi with pressure release means in order to provide not only a cooling or lubrication supply unit, but to be utilized as the power supply to the rolling unit (Column 1, lines 68 - Column 2, lines 1-2).

Alternatively, claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ostertag '739 in view of Pawlak '452 or Hatagi '226. Ostertag discloses a rolling unit with cooling means (Column 2, 25-27) including a pressure release means for releasing internal

pressure in the shaft when the internal pressure substantially exceeds a threshold pressure level (Column 2, lines 30-35; Column 4, lines 15-20; Column 5, lines 1-7 and Column 7, lines 14-20). Ostertag discloses the invention substantially as claimed except for the particular hollow shaft roller type. Pawlak and Hatagi both teach of a rolling unit having a hollow shaft as described above. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Pawlak's or Hatagi's particular hollow shaft roller type for Ostertag's rolling unit because simple substitution of one known element for another to obtain predictable results as demonstrated by Ostertag and his several different rolling units shown in Figures 1, 2 and 6.

***Allowable Subject Matter***

Claims 54, 55, 57, and 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The indicated allowability of claims 53 and 56 are withdrawn in view of the newly discovered reference(s) to Ostertag and Hatagi et al. Rejections based on the newly cited references are stated above.

***Response to Arguments***

Applicant's arguments filed November 17, 2008 have been fully considered but they are persuasive-in-part.

The Applicant argues that Pawlek's cooling line does not extend into the roll; however, by the Applicant's own admission, the cooling line extends into shaft 5 which extends into the body of the roll. Therefore, the Examiner maintains that this arrangement, as described above, is sufficient to meet the claim limitation of the "cooling medium line extending into the roll" via the shaft.

However, Applicant's arguments, with respect to the cooling lines remaining stationary when in use, have been considered but are moot in view of the new grounds of rejection; that is, the 103 rejection in view of Hatagi et al., as described above.

With regards to claims 36-41 and the Jarrett reference, the Applicant argues that a rotating bore would "cause interference and turbulence within the coolant flow." Whether these conditions occur or not is not on point, since the present claimed limitation does not require a lack of interference or turbulence. Furthermore, regarding the Applicant's statement suggesting that Jarrett is not adaptable to a dual flow system, the Examiner points out that claims 36-41 do not require a dual system as that particular limitation is only required by claim 32 which has a different dependency. Nevertheless, Jarrett is a secondary reference, in the field of the Applicant's endeavor of a coolant arrangement, relied upon to teach cooling line attachment means.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERESA BONK whose telephone number is (571)272-1901. The examiner can normally be reached on Monday-Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on 571-272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dana Ross/  
Supervisory Patent Examiner, Art Unit 3725

Teresa M. Bonk  
Examiner  
Art Unit 3725